

**PLAN VIEW**

THIS FIGURE IS ONLY MEANT TO DEFINE THE MINIMUM INFORMATION REQUIRED BY THE CITY OF CHARLOTTE TO BE INCLUDED IN A DETAIL FOR THIS TYPE OF TECHNIQUE. THIS FIGURE IS NOT MEANT TO REPRESENT A STANDARD DESIGN METHOD FOR THIS TYPE OF TECHNIQUE AND SHALL NOT BE USED AS SUCH.

**NOT TO SCALE**

**NOTES:**

1. ANGLED LOG STEP POOL STRUCTURES ARE USED IN RELATIVELY STRAIGHT, HIGH-GRADIENT STREAM-TYPE CHANNEL SECTIONS TO CREATE A STEP-POOL CHANNEL.
2. ELEVATION CONTROL POINTS SHALL BE DESIGNATED AT THE INTERCEPT BETWEEN THE RIFFLE CROSS SECTION STREAM BED AND THE ANGLED HEADER LOG TO ESTABLISH PART OF THE PROFILE OF THE CHANNEL. POOL ELEVATION CONTROL POINTS OR EXCAVATION TO A SPECIFIED MAXIMUM POOL DEPTH SHALL BE DESIGNATED TO ESTABLISH THE REMAINING PROFILE. SURVEY OF CONTROL POINTS SHALL BE REQUIRED TO ESTABLISH ACCURATE RIFFLE INSTALLATION WITHIN THE TOLERANCE SPECIFIED BY THE DESIGNER.
3. TYPICAL RIFFLE AND POOL CROSS SECTIONS SHALL BE PROVIDED ELSEWHERE IN THE PLANS TO ESTABLISH THE DIMENSIONS OF THE CHANNEL GRADING INTO WHICH THE ANGLED LOG STRUCTURE(S) ARE TO BE INSTALLED.
4. ANGLED LOGS SHALL BE OF A LENGTH AND DIAMETER SPECIFIED BY THE DESIGNER AND BE RELATIVELY STRAIGHT, HARDWOOD, RECENTLY HARVESTED. A SINGLE LOG MAY BE USED IN LIEU OF A HEADER AND FOOTER LOG COMBINATION; THE DESIGNER SHALL SPECIFY AN INCREASED MINIMUM DIAMETER SIZE IF NO FOOTER LOG IS USED. THE LENGTH OF THE LOG SHALL BE SUCH THAT WHEN APPLIED IN RIFFLE TYPICAL CHANNEL CROSS SECTION THE LOG SHALL BE BURIED INTO THE STREAM BED (ON ONE SIDE) AND STREAM BANK (ON THE OPPOSITE SIDE).
5. FILTER FABRIC OF A TYPE AND SIZE SPECIFIED BY THE DESIGNER SHALL BE USED TO SEAL THE GAPS BETWEEN AND UNDER THE ANGLED LOGS. THE FILTER FABRIC SHALL BE NAILED TO THE HEADER LOG USING A GALVANIZED NAIL WITH A PLASTIC CAP. THE SIZE AND GAGE OF NAIL AND SPACING OF THE NAILS INTO THE HEADER LOG SHALL ALSO BE SPECIFIED BY THE DESIGNER. THERE SHALL BE NO FILTER FABRIC VISIBLE IN THE FINISHED WORK; EDGES SHALL BE FOLDED, TUCKED, OR TRIMMED AS NEEDED.
6. COARSE BACKFILL OF THE ANGLED LOGS SHALL BE OF A TYPE, SIZE, AND GRADATION AS SPECIFIED BY THE DESIGNER. COARSE BACKFILL SHALL BE PLACED TO A THICKNESS EQUAL TO THE DIAMETER OF THE HEADER AND FOOTER LOGS AND SHALL EXTEND UPSTREAM A DISTANCE SPECIFIED BY THE DESIGNER.
7. BOULDERS OF A SIZE (LENGTH, WIDTH, AND DEPTH) AS SPECIFIED BY THE DESIGNER SHALL BE PLACED AS BALLAST ON TOP OF THE STREAM BANK SIDE OF THE EMBEDDED ANGLED LOG. DUCK BILL ANCHORS MAY BE USED IN ADDITION TO OR IN LIEU OF BALLAST AS SPECIFIED BY THE DESIGNER.
8. IF STREAM BANK PROTECTION ON THE STREAM BANK DOWNSTREAM AND OPPOSITE THE ANGLED LOG IS SPECIFIED BY THE DESIGNER, IT SHALL BE DETAILED SEPARATELY AND REFERENCED HEREIN.

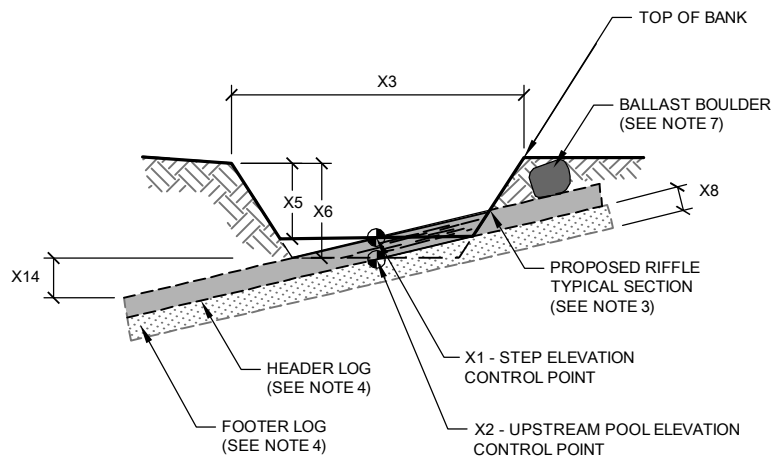


**CHARLOTTE-MECKLENBURG**  
**STORM WATER SERVICES**  
**GENERIC DETAIL REQUIREMENTS**

**ANGLED LOG STEP POOL**

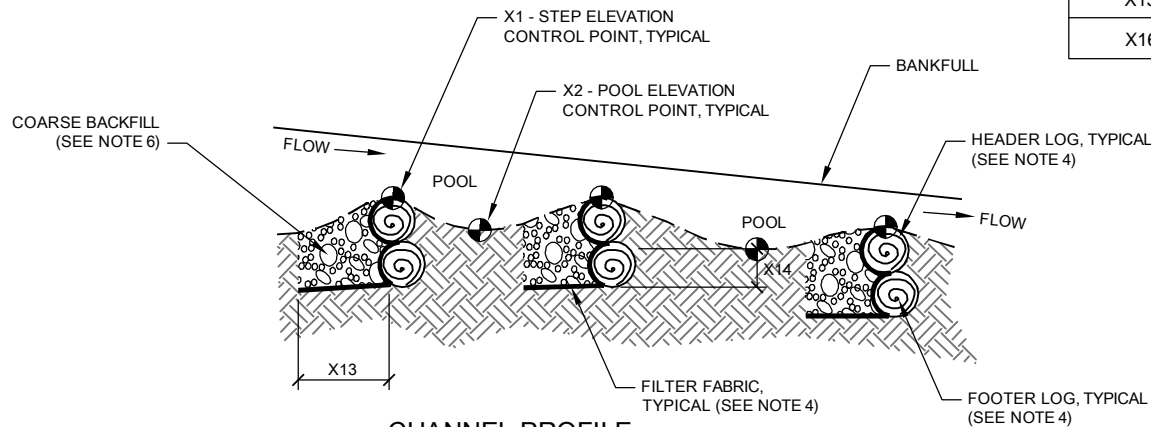
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**LOG SECTION A - A' LOOKING UPSTREAM**

DIMENSIONS (VALUES TO BE PROVIDED BY DESIGNER)			
VARIABLE	VALUES	TYPICAL UNIT	DESCRIPTION
X1		FT. (NAVD)	STEP ELEVATION CONTROL POINT
X2		FT. (NAVD)	POOL ELEVATION CONTROL POINT, IF SPECIFIED
X3		FT.	RIFFLE WIDTH
X4		FT.	POOL WIDTH
X5		IN. OR FT.	RIFFLE MAXIMUM DEPTH
X6		IN. OR FT.	POOL MAXIMUM DEPTH
X7		FT.	ANGLED LOG (HEADER AND FOOTER) LENGTH
X8		IN.	ANGLED LOG DIAMETER
X9		IN. OR FT.	BALLAST BOULDER LENGTH
X10		IN. OR FT.	BALLAST BOULDER WIDTH
X11		IN. OR FT.	BALLAST BOULDER THICKNESS
X12		IN.	D50 OF COARSE BACKFILL
X13		FT.	LENGTH OF COARSE BACKFILL
X14		IN. OR FT.	LOG EMBEDMENT DEPTH
X15		FT.	LOG EMBEDMENT LENGTH
X16		DEGREES	LOG ANGLE WITH STREAM BANK



**CHANNEL PROFILE**

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**ANGLED LOG STEP POOL**

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